

REMARKS

Claims 1-8 and 10-23 remain in the application and are now pending for reconsideration. Claims 1, 8, and 17 have been amended as set forth above to clarify the invention.

Claims 1-4 and 17-20 were rejected under 35 U.S.C. § 102(e) as being anticipated by Buhrgard et al. (U.S. Patent No. 6,671,255). Claims 8-16 were rejected under 35 U.S.C. § 102(e) as being anticipated by Craddock et al. (U.S. Patent Publication No. 2003/0005039). Claims 5-7 and 21-23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Buhrgard et al. in view of Craddock et al.

Buhrgard et al. discloses a method for the relative flow control of a data flow, and a switch in which the method may be applied. A buffer unit that reaches a certain degree of fullness sends a message to all units from which it receives data that it cannot receive any more data or that it can only receive at a reduced rate. The message is forwarded by each unit that receives it, to each unit from which it receives data and comprises a level indicator field, which is incremented for each unit it passes. For each unit passed a field is also added, identifying the unit from which it was received. Each unit is denoted by its number among all units receiving packets from the level above it. The message may be valid either for a certain period of time or until a new message is transmitted indicating that the problems have ceased.

The Examiner has asserted that Buhrgard discloses at column 4, lines 21-38 'determining whether if there are pre-post buffers specified for a client upon registration by the client', that Buhrgard discloses at column 5, lines 16-31 and in Fig 3 that 'if there are pre-post receive

buffers specified for the client, posting client specified receive buffers at management queue pairs (QPs) to receive the incoming data message', and that Buhrgard discloses at column 5, lines 32-42 'if no pre-post receive buffers are specified for the client, posting a default number of receive buffers at the management queue pairs (QPs) to receive the incoming data message'.

The Examiner has also asserted that Buhrgard specifically teaches buffer structure where each level there are buffer groups and designated with specific numbers as detailed at column 5, lines 21-31 that corresponds to buffers at management queue pairs. Even if this last assertion is true, the Applicants respectfully point out that the portions of the disclosure relied upon by the Examiner do not disclose or suggest at least the claimed determining whether there are pre-post receive buffers specified for a client upon registration by the client, if there are pre-post buffers specified for the client, posting client specified receive buffers at the management queue pairs (QPs) to receive the incoming data message, and if no pre-post receive buffers are specified for the client, posting a default number of receive buffers at the management queue pairs (QPs) to receive the incoming data message. If this rejection is maintained the Applicants respectfully request a more detailed explanation of this assertion by the Examiner.

The Craddock et al. publication discloses end node partitioning using local identifiers. A mechanism is provided to allow a single physical component to appear as multiple components each with unique control levels. End node partitioning for a physical element is accomplished by selecting a configuration of the physical element, probing a port associated with the physical element with a subnet management packet, and in response to detecting a switch associated with the port, assigning a local identifier to the port resulting in a configuration change of the physical element.

The Examiner has asserted that Craddock discloses at page 4, column 2, 0051 ‘determining whether if there are pre-post buffers specified for a client upon registration by the client’, that Craddock discloses at page 3, column 2, 0038 ‘if there are pre-post receive buffers specified for the client, posting client specified receive buffers at management queue pairs (QPs) to receive the incoming data message’, and that Craddock discloses at page 4, column 1, 0043 ‘if no pre-post receive buffers are specified for the client, posting a default number of receive buffers at the management queue pairs (QPs) to receive the incoming data message’. The Applicants respectfully point out that the portions of the disclosure relied upon by the Examiner do not disclose or suggest at least the claimed determining whether there are pre-post receive buffers specified for a client upon registration by the client, if there are pre-post buffers specified for the client, posting client specified receive buffers at the management queue pairs (QPs) to receive the incoming data message, and if no pre-post receive buffers are specified for the client, posting a default number of receive buffers at the management queue pairs (QPs) to receive the incoming data message. If this rejection is maintained the Applicants respectfully request a more detailed explanation of this assertion by the Examiner, since the Applicants do not understand the Examiner’s assertion that these claimed features are present in the Craddock et al. patent.

Neither of the references relied upon by the Examiner disclose or suggest at least claimed features of determining whether there are pre-post receive buffers specified for a client upon registration by the client, if there are pre-post receive buffers specified for the client, posting client specified receive buffers at management queue pairs (QPs) to receive the incoming data message, and if no pre-post receive buffers are specified for the client, posting a default number of receive buffers at the management queue pairs (QPs) to receive the incoming data message.

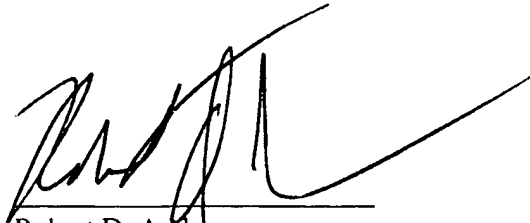
In the present invention as claimed, a determination is made upon client registration as to whether pre-post receive buffers have been specified for the client. If there are pre-post receive buffers specified for the client, a client specified number of receive buffers are posted at management queue pairs to receive the incoming data. If no pre-post receive buffers are specified for the client, a default number of receive buffers are posted at the management queue pairs to receive the incoming data message.

The Examiner has relied upon col. 5, lines 16-31 of Buhrgard et al. to disclose the posting of a client specified number of receive buffers at management queue pairs if there are pre-post receive buffers specified for the client. This portion of the Buhrgard reference discusses an example of a buffer structure with three buffer levels, and a variety of buffer groups having a various number of buffers. However, this portion of Buhrgard et al. does not disclose (or even suggest) posting of a client specified number of receive buffers at management queue pairs. The Examiner has asserted that "Buhrgard specifically teaches buffer structure where each level there are buffer groups and designate with specific numbers as detailed in col 5, line 21-31 that corresponds to buffers at management queue pairs". However, Buhrgard et al. does not disclose (or even suggest) posting of a client specified number of receive buffers at col. 5, lines 21-31. The Examiner has further relied on col. 5, lines 32-42 of Buhrgard et al. to disclose the posting of a default number of receive buffers at the management queue pairs to receive the incoming message. Buhrgard et al. does disclose at col. 5, lines 32-42 that the numbers m,n,r,s,x,y and z may be selected independently of each other but are often equal. However, this does not disclose (or even suggest) the feature of the claimed invention of posting a default number of receive buffers at management queue pairs if no pre-post receive buffers are specified for a client.

The Examiner has relied on page 3, col. 2, paragraph 0038 of Craddock et al. to disclose the claimed feature of posting a number of client specified receive buffers at management queue pairs to receive an incoming data message if there are pre-post receive buffers specified for the client. Paragraph 0038 of Craddock et al. discloses buffering of data to host channel adapter ports 312-316 channeled through virtual lanes (VL) 318-334 where each VL has its own flow control. As pointed out by the Examiner, Craddock discloses a host channel adapter that includes queue pairs 302-310 (for example, as illustrated in FIG 3 of Craddock et al.), and that Craddock et al. suggests memory translation and protection (MTP) 338 that translates virtual addresses to physical addresses, and suggests direct memory access (DMA) 340 at the top of page 4, paragraph 0038. However, the Applicants respectfully point out that paragraph 0038 of Craddock et al. does not disclose (or even suggest) posting a client specified number of receive buffers at management queue pairs to receive the incoming data if there are pre-post receive buffers specified for the client. The Examiner has relied upon page 4, col. 1, paragraph 0043 of Craddock et al. to disclose posting of a default number of receive buffers at management queue pairs to receive the incoming data if no pre-post receive buffers are specified for the client. As pointed out by the Examiner, paragraph 0043 of Craddock et al. does disclose that verbs provide a mechanism for retrieving completed work from completion queue 404, and that completion queue elements are therefore part of the management queue process. Completion queue 404 is used to create a single point of completion notification for multiple queue pairs. However, Craddock et al. does not disclose (or even suggest) at paragraph 0043 posting a default number of receive buffers at management queue pairs if no pre-post receive buffers are specified for the client.

The Applicants respectfully traverse the rejections in the outstanding Office Action for at least the reasons set forth above. In view of the foregoing, the application is considered to be in condition for allowance. Early notification of the same is earnestly solicited. If there are any questions regarding the present application, the Examiner is invited to contact the undersigned attorney at the following telephone number: 815-885-2389.

Respectfully submitted,



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Date

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